ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION,

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

VOL. VI. APRIL, 1895. No. 4.

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THOMAS SAY.—IV.

By Prof. F. M. WEBSTER, Ohio.

The vault in which are deposited all that remains of the "Father of American Entomology," with the monument erected to his memory by Alexander Maclure, brother of William Maclure, is located in the rear of the house in which Thomas Say breathed his last on Oct. 10, 1834, and which was shown in the illustration in the March number of the NEWS. The view of the vault and monument here presented is taken from Main Street and looking slightly south of west. The monument is of white marble, about six feet in height, the sculpture being sufficiently indicated by the engraving. It was erected in 1846, twelve years after the death of Say, by Alexander Maclure, at the request of his brother William, and bears the following inscriptions:

EAST FACE.

Thomas Say. The Naturalist. Born in Philadelphia, July 27, 1787. Died at New Harmony, October 10, 1834.

SOUTH FACE.

One of the founders of the Academy of Natural Sciences of Philadelphia, January 25, 1812.

MONUMENT ERECTED IN MEMORY OF THOMAS SAY.

WEST FACE.

The friend and companion of William Maclure, whose surviving brother erected this monument. 1846--A.M.

NORTH FACE.

Votary of Nature even from a child,
He sought her presence in the trackless wild;
To him the shell, the insect, and the flower
Were bright and cherished emblems of her power.
In her he saw a spirit all divine,
And worshipped like a pilgrim at her shrine.

The vault is of brick, arched, and entirely covered over with earth and grassy sward, its dimensions being about twelve by fourteen feet, the length extending from north to south, and the monument standing at the north end. The elevation of the mound is about three feet, while the excavation below ground is about six feet. Along the two sides and north end of this crypt, on the inside, there extend two platforms or terraces of solid brickwork, and on those on the east and west sides are deposited the remains of Alexander Maclure, Anna Maclure, and Margaret Maclure, brother and sisters of William Maclure, while on one of those on the north end, and nearest to the monument, are slowly mouldering away the mortal remains of Thomas Say, they having been disinterred and brought from their original resting-place in the cemetery by Mr. Maclure, at present represented by the bones only, all else being in a state of complete decay. Until within a year the vault contained also the remains of Mr. David Dale Owen, but these have recently been removed and interred in a cemetery near New Harmony. Very few persons have ever had an opportunity of viewing the inside of this crypt, and for a description, as well as a number of other points of information in this series of sketches, I am indebted to my esteemed friend, Mr. John B. Elliott, of New Harmony.

The writer will never forget a most impressive and beautiful view of the tomb and monument witnessed by him on a bright frosty morning in late November several years ago. As the guest of Colonel and Mrs Owen, he was assigned a room looking out upon the grounds included in the accompanying engraving. The night had been clear and frosty, the crystals forming thickly over every exposed object and increasing the dimensions of the

slender twigs and kindered objects until they appeared several times magnified. On throwing back the shutters in the early morning the whole area—the tomb and monument especially, as appeared to me, were shrouded in purest white, thickly bespangled over with the most brilliant jewels of silver and gold—a fitting mantle, I thought, for the pure and unselfish man who slept so calmly and peacefully beneath its folds.

———o———

NOTES ON TYPES OF NORTH AMERICAN GEOMETRINA IN EUROPEAN COLLECTIONS.—V.

By Geo. D. Hulst.

(Continued from page 73, vol. vi, Ent. News)

Patridava tensaria Wlk. 1689, is *Tornos approximaria* Pack. and is the same as *Exelis pyrolaria* Gn. i, 324. *Tornos infumataria* Grt., the type in the Museum is the same species.

Lepiodes scolopacinaria Gn. i, 360, is *Tornos rubiginosus* Morr.

Scotosia inexplicata Wlk. 1722, is a Noctuid upon the authority of Mr. Hampson, and I agree with him. The type lacks one front wing, and is otherwise in poor condition. Mr. Butler writes me: "I have placed it tentatively in the genus *Anarta*, which it much resembles in pattern."

Apicia denticulata Wlk. Sup. 1544, is also a Noctuid. "It is the rusty form of *Pleonectyptera pyralis* Hbn., previously described by Walker as *irrecta*, and by Grote as *geometralis*." Mr. Hampton called my attention to the species, and Dr. Butler independently wrote me concerning it, and gave the synonym which I quote.

Cidaria rigidata Wlk. 1727, is a synonym of *Anticlea vasaliata* Gn. ii, 407.

Cidaria explagiata Wlk. 1728, *Larentia arctica* Zell., *Geometra albimacularia* Frey, and *Cidaria fulvida* Butler are put by Mr. Warren as synonymous of *Perizoma tæniata* Steph. There is probably some mistake here. Walker, in his description, says his type is from Nova Scotia. If I am not mistaken in my notes, the Museum type is from St. Petersburgh, Russia.

Drepanodes siculata Gn. i, 67, is the same as *D. perizonata* Hulst.

Apicia juncturaria Gn. i, 88, is *Drepanodes effascinaria* Hulst. *Apicia incopularia* Gn. i, 89, is the same species.

Apicia spinitaria Gn. i, 85, is a South American insect, which I do not believe was ever taken in North America. It is, I think, an undoubted error in locality.

Metrocampa prægrandaria Gn. i, 128, is the same as *M. perlata* Gn., and has priority on the page.

Ellopia placearia Gn. i, 132, is very near to *Tetracis mellitularia* Hulst. The latter is at best a variety.

Eurymene emargitaria Gn. i, 145, is the same as *E. arrogaria* Hulst, and is not *E. fervidaria* H.-Sch.

The type of *Metanema forficaria* Gn. i, 112, is lost. I have little doubt it is the same as *Tetracis ægrotata* Gn. The type of *Timandra viridipennaria* may also be lost. It ought, by color, to be easily identified, but I cannot locate it. It may possibly be *Nemoria pistacearia* Gn., or *N. tepperaria* Hulst.

The type of *Bronchelia dendraria* Gn. is lost, but there is no doubt that it is a variety of *B. hortaria*. *Tephrosia amplaria* Wlk. 405, is the same species, as is also *Bronchelia disserptaria* Wlk. 451.

Tephrina muscariata Gn. ii, 98, is *Semiothisa delectata* Hulst.

Selidosema fœminaria ii, 149, is not a synonym or variety of *S. juturnaria* Gn. ii, 147, but a dark form of *Tephrosia celataria* Hulst.

Aspilates sigmaria Gn. ii, 184, and *Ellopia aniusaria* Wlk. 1507, are the same as *Eufitchia ribearia* Fitch.

Eupithecia subapicata Gn. ii, 331, is the same as *E. occidentalis* Pack.

Melanippe iduata Gn. ii, 403, is *Rheumaptera fluctuata* L.

The type of *Coremia convallaria* Gn. ii, 410, is lost. It seems to me it must be *Ochyria lignicolorata* Pack. from the description. The existence of the three rows of black points seems conclusive.

The type of *Coremia plebeculata* Gn. ii. 417, is lost. I feel certain, however, it is the same as *Ochyria carneata* Pack.

Spargania magnoliata Gn. ii, 455, is one with *Glaucopteryx cumulatilis* Grt.

Cidaria mancipata Gn. ii, 468, is probably *Petrophora leoninata* Pack. The type is lost.

The type of *Eubolia custodiata* Gn. ii, 491, is lost.

The following species, accidently overlooked by me while at the Museum, were determined for me by Dr. Butler, and they have been given their places in the body of this article :

Tephrina retectata Wlk. 959 = *Psamatodes eremiata* Gn. *Cidaria albopunctata* Morr. = *Caripeta divisata* Wlk. I had already determined this from the description. *Aspilates intermicata* Wlk. 1076 = *A. pervaria* Pack. *Ennomos concisaria* Wlk. 1551 = *Endropia serrata* Dru. This also I had located from the description. *Camptogramma abruptata* Wlk. = *Semiothisa granitata* Gn.

Dr. Butler also informs me there may be types of the Canada species of the D'Urban collection in the Albert Memorial Museum at Exeter, where Mr. D'Urban was curator.

The following species of Walker I was not able to find in the Museum, nor do their names appear in the very complete manuscript catalogue of the collection :

Acidalia arcticaria, 1594; *A. suppressaria*, 1594; *A. inclusaria*, 1596 ; *A. albifera*, List Sup., 1625 ; *Aspilates abbreviata*, List 1673 ; *A. donotaria*, 1674 ; *Stegania quadrinotata*, 1759 ; *Tephrina pervelata*, 1760.

The following species of Walker, described from D'Urban collection, are probably lost. They were given to the Entomological Society of Ontario, and were in its possession in 1876. Somehow since, they have disappeared and are almost surely destroyed by *Dermestes*. These were described in the "Canadian Naturalist," vols. v and vi, and about the same time in the British Museum List. The references are to the list :

Cleora tinctaria, 486 ; *Boarmia convergaria*, 488 ; *B. ejectaria*, 489 ; *Macaria spilosaria*, 1641.

As said above, *B. convergaria* and *B. ejectaria* were declared by Mr. Grote to be synonyms, though he did not state of what species. As he made reference in this remark to six species, *Cleora tinctaria* and *M. spilosaria* may have been included.

Through an accidental overlooking of the types which may not exist, in the case of those of Guenée, I did not see the following :

Boarmia clivinaria Gn. Phal. i, 245 ; *Tephrina sabularia* Gn. ii, 205 ; *Phibalapteryx floridata* Wlk. 1719; *Pseudosiona taylorata* Butler.

The following were described from colored pictures of Abbott, and may yet be identified :

Boarmia porcellaria Gn. Phal. i, 252 ; *Ceratonyx satanaria* Gn. i, 194.

The following I have not been able to positively identify, and cannot locate the types, if indeed they exist :

Phalæna bicolorata Fabr. Sup. 149–150 ; *Oporabia punctipes* Curtis, Appen. Ross' 2nd voy. p. 73 ; *Phasiane cruciata* Grt. Ann. Mag. N. H., 1883, p. 55 ; *Hydriomena transversata* Kellicott, Buff. Bull., vol. v, 45, 1886 ; *Pryocycla johnsonaria* Fitch, N. Y. Reports, xiii, 530.

Of these *O. punctipes* is almost certainly *Glaricopteryx polata ;* of *P. cruciata* I have lately seen the type and is one with *P. curvata* Grt. *H. transversata* is probably *H. truncata.* The type is lost. *P. johnsonaria* is almost certainly *Endropia bilinearia* Pack. and antedates it.

The following are shown in colored figures, but I feel uncertain about them :

Phalæna virginiaria Cram., vol. iii, p. 275, f. G ; *Arrhostia lumenaria* Hüb., Zutr. f. 757–758 ; *Hypargytis pustularia* Hüb., f. 103–104 ; *Dysstroma morosata* Hüb., 879–880 ; *Petrophora divisata* Hüb., Ex. Schm., Lep. v, Pet. B, Flavæ a ; *Eulepidotis alabastaria* Hüb., f. 311–312 ; *Larentia profugaria* H.-Sch. Auseu. Schm., f. 410–411.

P. virginiaria looks like *Bronchelia hortaria ; A. lumenaria* is very probably *Ephyra pendulinaria* Gn. ; *H. pustularia* is likely *Eumacaria brunneaaria* Pack. *D. morosata* may not be from the United States, as the locality is given as "Nord Amerika." *E. alabastaria* may be *Acidalia enucleata* Guen.

Mr. Warren has quite a number of new species from North America in the British Museum collection. They have type labels and manuscript names upon them, but have not yet been described. I have made no mention of them in these notes, as they have as yet no scientific standing. The most of them are synonyms of already described species, and with one or two exceptions none have, I think, anything more than varietal standing.

THE youth of Germany, Jaeger says, are extremely fond of Field-crickets, so much so, that there is scarcely a boy to be seen who has not several small boxes made expressly for keeping these insects in. So much delighted are they, too, with their music, that they carry these boxes of crickets into their bed-rooms at night, and are soothed to sleep with their chirping lullaby.—*Life of Amer. Ins.*, p. 114.

ABERRATION, VARIETY, RACE and FORM.

By Dr. RODRIGUES OTTOLENGUI.

(Continued from page 80, vol. vi, ENT. NEWS.)

Professor Packard argues against increasing the burden of nomenclature; but there is good reason why names should be given, if they could only be attributed intelligently. Let us suppose that a man breeds an insect and produces from the larvæ two distinct forms—one typical and the other sufficiently numerous in proportion to the whole brood that it is assured to be a variety rather than an aberration. According to Prof. Smith and Dr. Skinner, it would be best not to name this new variety, because it is known positively, despite its extreme difference in appearance, to what species it belongs. He therefore merely reports his work without assigning a name. Fifty years after him a student discovers a form, new to him, and not in the collections of his acquaintances. He cannot be held responsible for not knowing what the first man wrote, for he might be unable to obtain the work in which the record was made. He would, therefore, be tempted to consider it a new species. If, however, the first man named his variety the name would always appear in our check lists, and the student would instantly know that his supposed new form might be but a variety, and with the name in the check list to suggest such a search he would look for the record and find it. I think that names should be given to all distinct and permanently occurring forms for this reason. In the matter of varieties, if there is only the typical and one extreme form, the latter being more abundant than any of the intergrades, then I would name the extremes, because they, the typical and the extreme, could always be dissociated from the intergrades, and thus represent something distinctive. Where there are several distinct forms, which can be dissociated from the intergrades, then each distinct form should receive a varietal name regardless of the existence of intergrades.

The local race should also receive a name, for it is very close to a new species in the order of evolution.

Dimorphic and sexual forms should receive names to indicate to the student that they belong to a known species.

Aberrations should rarely receive a name until found in sufficient numbers to indicate that the prophecy of a forthcoming variety might be fulfilled. I think examples of opposite sexes, though only one of each were found, would suffice for this.

APHODIUS RUGIFRONS.

By H. C. FALL.

Among the species of *Aphodius* occurring in So. California, *A. rugifrons* is, in several respects, peculiar. Unlike every other species of the genus with which I am acquainted, the approach of Winter rather than of Spring is the signal for its appearance. Like *Pleocoma*, it should be sought immediately after the first considerable rainfall in November or December.

For several years I have at this season taken examples of this species, but as it is called for by every eastern collector with whom I have exchanged, the supply has never equaled the demand. The past season I determined to make special effort to renew my stock, and began to look for it as early as the latter part of October. As I anticipated, however, not an individual appeared until the first rain of consequence, which occurred December 5–8. A search through the garden on the 9th revealed dozens of specimens; almost every small object lying on the surface sheltered one or more, while the numerous little openings in the damp soil showed the manner of their advent. In coloration the elytra are normally yellow with black markings, but about one example in ten is entirely piceous. The size also varies, unusually .10 to .15 inch, the smallest specimens being in this respect inferior to every other species in our fauna.

In addition to the above it may be remarked that never in my experience have the beetles been seen on the wing, nor have they ever been found in situations usual to the species of the genus.

The limited geographical range, time of appearance, small size, retiring habits and brief stay, are factors which have combined to make *rugifrons* up to this time a rarity in collections.

Besides *rugifrons*, I have taken in So. California *granarius*, *lividus*, *alternatus*, *rubidus*, *militaris*, *pardalis* and *luxatus*. With the exception of *granarius* and *rubidus*, none are at all common, while *lividus* and *pardalis*, so far as I know, have not been recorded from this section.

A VERY pretty species of Cetoniidæ, the *Agestrata luconica*, is of a fine brilliant metallic-green, and found in the Philippine Islands. These the ladies of Manilla keep as pets in small bamboo cages, and carry them wheresoever they may go.—*Baird's Cyclop. Nat. Sci.*, London, 1858.

A CURIOUS HAMMOCK AND ITS MAKER.

Coriscium cuculipennellum Hübner.

By M. V. SLINGERLAND, Ithaca, N. Y.

In 1890 I noticed that several of the leaves on a young ash tree near my office window had been rolled into peculiar cones by some insect. The same year, while reading that quaint and charming little volume on "Insect Transformations," written by Rennie three-score years before, I found, on page 324, an interesting account (from Bonnet) of this or a similar ingenious cone-maker. This account led me to study the insect more closely, with the results given below.

I succeeded in rearing some of the adult insects in July, 1891. In the figure A is shown one of the grayish fuscous moths, about three times natural size; the markings on the wings are of a dark-brown color. A specimen was sent to Dr. Fernald, who finally decided (in January, 1893) that it was a new species; and he gave it the manuscript name of *Coriscium slingerlandella*. Anyone whose name has thus been applied to some insect can understand the peculiar interest with which I then looked upon the little creature. But Dr. Fernald had sent one of my moths to Lord Walsingham in February, 1892. Nearly a year later, and about a month after Dr. Fernald had named the moth, word came from Lord Walsingham that the insect was identical with one of Hübner's species, *cuculipennellum*. Dr. Fernald has called attention to the fact that the insect had never been observed in this country before ("Canadian Entomologist," xxv, 196). It was with a slight twinge of regret that I relabeled my specimens with the equally long name, and proceeded to search the literature for some account of its habits which might supplement my observations. I found that Ragonot had given a detailed account of its life-history in 1873 (Bull. de Soc. Ent. de France, pp. 166–168).

The following account of the life-history of this curious hammock-maker is drawn from my observations and from the accounts of Rennie and Ragonot: The pretty little moths emerge in the latter part of Summer or early Fall and doubtless hibernate. They come forth in the Spring and "deposit a single egg upon the upper surface of the leaf by the side of the mid-rib near the tip. A week or ten days later the larva leaves the egg and

introduces itself under the epidermis. Directing itself towards the petiole, it mines a long and straight gallery the length of the nerve. The cast skin which it detaches is extremely fine, shining and silvery, resembling the trace of a slug. The pale redish-brown excrement is scattered in the mine. Arriving at the petiole, the larva ascends near the edge and suddenly enlarges its mine in the form of a plate, and the edge of the leaf is curved up and rolled. Soon it is no longer contented with ruminating in the leaf, and attacks it directly, devouring a considerable portion at the edge of the leaf. This tion of its habita lodging soon before it, and it goes comes too narrow (Ragonot). Here upon another leaf." and rolls the leaf it begins at the tip cone. Sometimes obliquely into a involved, as shown the whole leaf is but usually only a in the figure C; B. I have never obportion of it, as in habits of the insect, served the mining cones are conspicubut the curious the normal foliage ous objects among in June (in August in France). The larva continues to feed upon the edges of the leaf that are rolled into the interior of its conical home. About June 15 the larva reaches maturity, and is then from 8–10 mm. long, and of a light yellowish flesh color, greenish dorsally, the head a little darker than the body, and the mouth-parts brownish. It has four pairs of pro-legs borne by the third, fourth, fifth and tenth abdominal segments. The segments are considerably wrinkled, and the whole body is sparsely clothed with quite long whitish hairs. In its preparation to transform one must admire the larva's foresight and intelligence. It first eats almost through the leaf over a small round area, taking care to leave only the outer epidermis of the leaf, and thus forms

FIG. A.

FIG. B.

FIG. C.

a little window, scarcely larger than a pin's head. This epidermal window-pane serves to keep out all foes, and, as we shall see later, facilitates the emergence of the moth. Within its capacious one-windowed chamber it now proceeds to build its hammock, within which it changes to a pupa. The walls of the cone-like home have been cut away in C to show this pupal hammock. No one has seen the larva swing this hammock. But it is probably accomplished by first spinning a single-cable bridge of several silken threads from a point near the window to another point, sufficiently distant, on the opposite wall of the chamber. When satisfied that this silken cable is well anchored at each end, the larva doubtless stretches itself along the cable near the centre, with its head toward the window, and then proceeds to spin about itself a silken hammock—its cocoon. The cocoon is white in color, and has several ribs running its whole length.

The pupa rests in its silken hammock for nearly a month; then, with the aid of a beak-shaped projection on its head, it tears open the end of the cocoon, and the window is soon reached. One cannot but marvel at the foresight of the little larva in making this window, then fastening one hammock rope at its edge, and, finally, always getting into the hammock with its head toward the window. The beaked head of the pupa soon bursts through the window-pane and projects itself half-way out of the opening, and soon the pretty moth emerges and flits away to find some secure hiding place for the Winter. Some of the conical homes containing the pupal hammocks became dry and hard in my cages, and the pupæ were then unable to break through the window. When I broke some of the windows the moths emerged freely. Thus the little windows are made primarily for the purpose of facilitating the emergence of the adult insect. And, as Rennie says, "In order to render this little door easy to be found, the caterpillar, as if foreseeing that the blind pupa could not otherwise discover it, fixes one of the suspensory threads near its margin, guided by which the insect makes its exit with the utmost ease, for the head is uniformly swung up by the door thread."

Hübner found the cones on Privet; I have thus far seen them only on Ash. There is apparently but one brood of the insect in a year. Each year, as I look from my office window and see a few of these peculiar cones on the Ash tree, I am more and more impressed with the almost human intelligence displayed by this little hammock-maker.

Notes on Rhopalocera, with Descriptions of New Species.

By Dr. Henry Skinner, Philadelphia, Pa.

We have in our lists a number of species which are stragglers from other faunæ, and among them some that are supposed to be improperly credited to our fauna. Mr. Edwards, in his catalogue published in 1884, gives a list of these. I have in my collection a specimen of *Papilio cresphontinus* Martyn, "Psyche," t. 3, fig. 8, t. 4, fig. 10 (1797). This was taken at Key West, Fla. The species is well figured in the "History of Cuba," by Sagra. I have also recently had sent to me for identification a species of *Kricogomia* described in the "Biologia Centrali-Americana," under the name of *unicolor*. It is described by Godman and Salvin as follows: Alis Sulphureo-flavis unicoloribus, subtus (praeter dimidio anticarum basali aurantio) pallidioribus et sericeis; linea longitudinali mediana albida. The specimen came from Comal County, Texas. I have also had direct from its collector a specimen of *Victorina steneles* taken in Blanco County, Texas, in November, 1894. *Lycæna xerces* Boisd., which was supposed to be extinct, has been recently taken in California. I have received a pair in exchange, but was not informed of the exact locality where they were caught.

Thecla sarita n. sp.—Upperside of all wings immaculate; fringes white. The hind wings each have a delicate tail about one-eighth inch in length, black, with a distinct white tip which is about one-fourth the entire length of the tail. The costa at the base is reddish brown. All wings are a dark purple color like some of our species of *Chrysophanus;* this color is brighter in the centre of the wings, the remainder being blackish. There is a projection of the wing at the anal angle which might also be called a tail. *Underside* of all wings bright green; the superiors have a narrow, bright, silver stripe extending from the costa to about third median nervule; this stripe runs parallel to and about one-eighth inch from the exterior margin. The lower half of the superior wing is light gray. There is a similar silver stripe on the inferiors, extending from the costa to the anal angle; this stripe is swollen in the middle and becomes very narrow, and on reaching the border of the wings bends at an acute angle and runs to the abdominal margin, thus forming a **V**. There is a distinct border to the inferior wing about an eighth of an inch wide, the inner line of the border being covered with bluish-silver and red scales, the border itself being composed of red scales and spots on a gray background. The projection at the anal angle has on it a round red spot, partly surrounded by white. The purple upperside and the bright green below with the silver bands make this a very distinct and beautiful species. It expands about one and one-eighth inches.

Described from one specimen, a ♂, received from Mr. F. Rauterberg, who has kindly permitted me to retain the type, which came from Comal County, Texas.

Melitæa neumoegeni n. sp. or var.—The specimens were received some time ago from Mr. Neumoegen and have been in my collection and his under the manuscript name above given. Male. Expands one and a half inches. *Upperside:* all wings bright brick-red, fringes white, alternating with black at the nerve endings. The wings are edged by a very narrow black line, and just inside of this and very close to it is another line of like character. The superiors have comparatively few markings, and these are faint. In the cell are two rings, and at the end of cell a black irregular line running from the costa; beyond this is another line of similar character, and there are a number of yellowish lunule-like markings at the tip. The inferiors are marked in a similar way, but there is considerable black at the base of the wing. *Underside:* the superiors practically as above, but all markings less distinct, except at the apices, where there are four or five distinct white spots, and below these, on the margin, two more. The inferiors, as in *M. gabbii*, with silvery-white spots. but the intervening spots are brick-red and with no black of any moment, The females are larger and present the usual differences found in the genus. It is difficult to accurately describe species of *Melitæa*, but this one differs from other species in its peculiar color and the paucity of markings, especially on the superiors below.

Described from three specimens in my own collection and from several in the late Mr. Neumoegen's. In the list it would probably stand next to *M. gabbii*. From Utah.

Eudamus protillus rauterbergi n. var. ♂.—Expands one and three-fourths inches. *Upperside:* dark smoky-brown in color; the superiors have nine hyaline spots, a faint one on middle of costa, and three extending in a line between this and the inner angle; one in middle of disc and a faint one in the interspace above; three are close together below the costa on the outer third of wing. Inferiors immaculate, with tails a half inch in length. Fringes alternating black and cinereous. *Underside:* superiors as above. Inferiors grayish with blackish longitudinal bands. This form is smaller and very much darker than *Protillus;* the fringes are far less marked, and the tails lack the admixture of light hairs; the maculation is about the same, but in all other ways there is much difference.

One specimen from Mr. F. Rauterberg, who received it from Comal County, Texas. I have also seen a specimen belonging to Dr. Wm. Barnes, taken in Arizona.

Amblyscirtes celia n. sp. ♂.—Expands one and one-eighth inches. *Upperside:* dark smoky-brown, almost black; fringes alternating black

and cinereous. Superiors have the usual three small spots on outer third of wing extending in a row from costa; there is a row of small yellowish white spots running across the centre of the wing in a line with the apex and middle of the interior margin; they vary in number in different specimens from none to four or five. Inferiors immaculate. *Underside:* superiors practically as above. Inferiors very finely mottled with light gray scales and showing in centre of the wings a number of small, indistinct whitish spots. The sexes are alike, except in the usual difference in size and the female having less of the central spots on superiors above. This species is dark as in *vialis*, *nysa*, *samoset* and *textor*, and in markings nearest to *ænus*, but is entirely different in color.

Described from specimens from Blanco, Comal and Nueces Counties, Texas.

———o———

VESPEROCTENUS FLOHRI Bates.

By Geo. H. Horn, M.D.

The insect indicated by this name will probably remain unseen to the vast majority of the readers of News, and would have remained unmentioned here but for an article in a recent number of "Ent. Mo. Mag."

Vesperoctenus, at first glance, resembles a longicorn of the Leptura series apart from its flabellate antennæ, and was described by Mr. Bates as allied to that series, especially to *Vesperus*, from which it partly derives its name.

My knowledge of the insect came through a pair of males collected in the Peninsula of California, and were referred to me for study with the other Coleoptera collected there by the California Academy of Sciences. I would certainly have described the species as entirely new had not a timely visit from Mr. Flohr prevented.

In my paper on the Coleoptera of Baja California I could not agree with Mr. Bates, but placed the insect in the Rhipiceridæ, giving my reasons and citing Callirhipis as a convenient point of comparison.

In the article in "Ent. Mo. Mag." Mr. Gahan defends the opinion of Mr. Bates, and, of course, criticizes mine.

At present I do not propose to continue any argument, having said all that I deem necessary on my own part, and will leave to others the adoption of either view. My comparison with Callirhipis was, as stated, a mere matter of convenience from its flabel-

late antennæ, but my argument is intended to apply to the entire family as characterized in the books, the genera composing it being but few in number and differing widely.

My principal object in writing these lines is to object to a method of argument on Mr. Gahan's part, and it is not the first time that the method has been used by my English friends in argument against myself and Dr. LeConte. It is the assumption that we have no collections for reference beyond our own species. "In fact, I believe that Dr. Horn himself, were he really acquainted with *Vesperus* * * *" such is the insinuation, and it is untrue.

Again, I certainly did not intend "to impute carelessness or worse" to Mr. Bates, but I must be allowed the privilege to differ in opinion when I think there is reason.

No one can have higher regard for Mr. Bates than I, but no matter how learned a man may be it is possible to be in error at times and there is not a master in Entomology in whose writings there are not errors of judgment or through carelessness, or even both.

Had I been compelled to admit that I had not seen *Vesperus* the criticism of Mr. Gahan is equally a criticism of the published descriptions and figures of that insect.

At Cumana (a city of Venezuala), the use of the Cucujus (*Elater noctilucus*) is forbidden, as the young Spanish ladies used to carry on a correspondence at night with their lovers by means of the light derived from them.—*Baird's Cyclop. Nat. Sci.*, London, 1858.

The *Mantis religiosa* of America is said to make a most interesting pet when tamed, which can be done in a very short time and with but very little pains. Professor Glover, of the Maryland Agricultural College, tells me he once knew a lady in Washington who kept a *Mantis* on her window, which soon grew so tame as to take readily a fly or other small insect out of her hand.—*Cowan's Curious Facts.*

Chernetid attached to a Fly.—In Europe a number of Chernetids have been found attached to various insects. In this country, I believe, but one species has been recorded,—*Chelifer alius* on *Alaus oculatus* by Leidy. This appears to be the same as *Ch. oblongus* Say. I have recently received, through Mr. C. F. Baker, a specimen of *Chelanops pallipes* Bks., collected by Mr. J. C. Cowan at Hotchkiss, Colo., which was attached to a fly—a species of Dexidæ. *Ch. pallipes* was previously known from California.—Nathan Banks.

ENTOMOLOGICAL NEWS.

Published monthly (except July and August), in charge of the joint publication committees of the Entomological Section of the Academy of Natural Sciences, of Philadelphia, and the American Entomological Society. It will contain not less than 300 pages per annum. It will maintain no free list whatever, but will leave no measure untried to make it a necessity to every student of insect life, so that its very moderate annual subscription may be considered well spent.

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PHILADELPHIA, PA., APRIL, 1895.

A LETTER TO THE "NEWS."

I am, I suppose, a tryo in entomology, yet I am earnestly and constantly seeking help and advice from books and periodicals on entomology. I spend twelve weeks each year teaching some hundred and fifty pupils about insects, their structure and habits. This is done not from books, but from insects themselves. I collect each Summer about twenty-four species of insects, in quantities of from 200 to a 1000 of each species. You can easily understand that I am likely to get many insects of other species. I know at sight about 150 species of beetles and quite a number, say fifty to a hundred species of Hymenoptera and Diptera. I have a collection of about 1000 species of insects. Yet, notwithstanding all this, I find the reading of the NEWS uninteresting. It tells me about so many species of insects of which I have no knowledge, nor the slightest conception what they are, nor means of finding out; while it tells me so little of those with which I do have a speaking acquaintance, or how to increase my knowledge of insects in general.

I am not even suggesting that the NEWS should change its plan of work to benefit me, or those like me. I know it is vastly more creditable, even if less profitable, to publish a paper the back numbers of which, filed away unread in entomological libraries, will be overhauled and quoted as authority twenty or fifty years from now. But that does not help me, nor those like me. I want help, suggestions, inspiration NOW. I have as yet found no periodical of that kind. The entomological journals for amateurs that I have already seen so far, are enough to make a man weep. But I know that there is a field for an entomological journal less technical than the NEWS, but still scientific and respectable.

It seems to me that entomologists are of two kinds: First, amateurs, who have learned what little they do know by the hardest means, and who are yet timid about asserting what they do know; Second, fullfledged entomologists, born fullgrown with a net in their hands. I do not think the latter class have a contempt for the former, but through a lack of knowledge of the experiences of the first they act as they would act if they did have a contempt for the first class.

You will certainly understand that in my remarks I do not intend to make any strictures upon the NEWS; but I am merely trying to state facts, as nearly as I can see them, that renders it undesirable to subscribe for the NEWS.—N. A. H.

WE have published this letter, as it is one of a kind that we receive not infrequently. The NEWS, as one of our former subscribers termed it, "shoots over the heads of some people." Now, the question is, how can this be remedied? The author of this letter claims to be a teacher of entomology, not from books, but from the insects themselves. He is the very man to give us an occasional popular article. The editors can't afford to write popular articles to make up each issue of the NEWS, as they have not the time so to do, and they are entirely dependent on subscribers for such articles. We try to have something in each number of interest to every one, and if we fail we can't help it. Some time ago we sent out circulars to all subscribers asking for popular articles, but they came not. If any subscriber fails to find one dollar's worth in the three hundred and twenty or more pages of NEWS we give for that amount, he had better invest his money in some other channel and become a millionaire. It will be found that the articles in the NEWS are written pretty much by the same people each year, and, while we are more than pleased with them, we would also like to hear from the people who are always talking about a more popular journal. We think many subscribers must be under the impression that the NEWS is a money-making scheme, and that those conducting it are making a fortune. The editors and all those connected with it subscribe their dollar, and they think they get an ample return; moreover, the American Entomological Society aids the NEWS financially, and every subscriber is indebted to said society, as it pays part of each subscription. Now, ye lovers of popular articles turn in and do your share and stop growling.

THE striped turnip-beetle, *Haltica nemorum*, commonly called the *Turnip-fly*, *Turnip-flea*, *Earth-flea-beetle*, *Black-jack*, etc., is a well-known species from the ravages the perfect insect commits upon the turnip. In Devonshire, England, in the year 1786, the loss caused by these insects alone was valued at £100,000 sterling. And in the Spring of 1837 the vines in the neighborhood of Montpellier were attacked to so great an extent by another species, *Haltica oleracea*, in the perfect state, that fears were entertained for the plants, and religious processions were instituted for the purpose of exorcising the insects.—*Curtis Farm Insects*, p. 22.

DEPARTMENT OF ECONOMIC ENTOMOLOGY.

Edited by Prof. JOHN B. SMITH, Sc. D., New Brunswick, N. J.

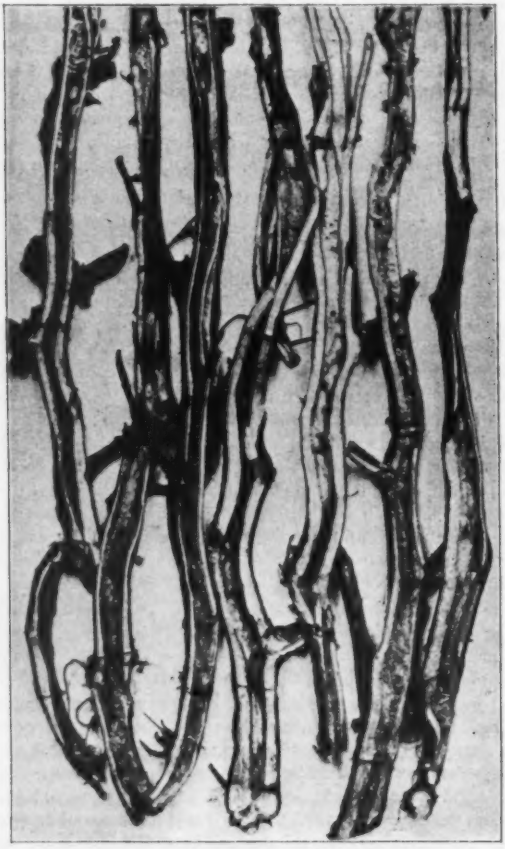
Illinois Entomology.—The 18th Report of the State Entomologist on noxious and beneficial insects of the State of Illinois for the years 1891 and 1892 is at hand. This is the 7th Report by Forbes, and it is certainly no worse than any that have preceded it. Practically, the Report is taken up by a treatise on insects that are injurious to corn; and this subject is handled more fully and more practically than ever before. A decidedly marked feature in the Report is the frequent recommendation of farm practice to prevent injury by the insects, and this is fully in line with the conclusions that I have been forced to more and more during the past years. Insecticides unquestionably have a very great range of usefulness, and for some purposes it will be impossible to do without them; but, on the other hand, I think there is as little doubt that in a great variety of cases we can reach the desired end, not so much by poisoning the insects, but by simply preventing their propagation by reasonable methods of farm culture. It is rather interesting, and it marks a somewhat new phase in handling the subject, that as against the corn aphis the destruction of the nests of certain ants is recommended. Of course, there is nothing very new at the present time in the relation of ants to plant lice; but I believe that this is the first time the practical possibilities involved in this relation have been taken advantage of for the benefit of the farmer. A somewhat interesting feature of the Report is the fact that the sensory pittings of antennæ and legs of the plant lice are figured. I believe I was the first of recent date to draw attention to the usefulness of these pittings, and the pictures published by me in Bulletin No. 75 of the New Jersey Agricultural College Experiment Station were the first ever published in any economic work where plant lice were treated.

A Benighted Country: That is what Mr. Edwin C. Reed calls Chile, and the following experience, which he details, goes far to support him. He writes: "In 1891–92 I was commissioned to stop an invasion of locusts that passed the Andes and laid some forty tons of eggs in Southern Chile. There was great alarm and a vote of $200,000. I found that the climate would kill them off, except in a few snug corners, where I did what was needful. The locusts were exterminated, and less than $5000 spent; but I got no thanks." Now, with all due regard to Mr. Reed, he should have taken some lessons in the United States in order to have managed this matter properly, to the advantage of economic entomology, and to make a great man of himself. After he discovered that the climate would kill off all the locusts, except in a few snug corners, he should have kept this

knowledge carefully to himself; he should have used all sorts of materials for experimental purposes in those places where the climate would have killed them off anyway, and he should have spent every cent of the money, carefully avoiding those snug corners. Then, next year he should have pointed with pride to the fact that wherever he had been and had tried his experiments that there no locusts appeared, and that only where he had not made applications the insects again appeared the following year. The facts would have been incontrovertible and Mr. Reed would have made a reputation that would have lasted the balance of his life, and would have had, besides, the pleasure of expending a snug little fortune. Mr. Reed is undoubtedly a good entomologist in more ways than one, but in our own country I am afraid that he would be considered as sadly behind the times.

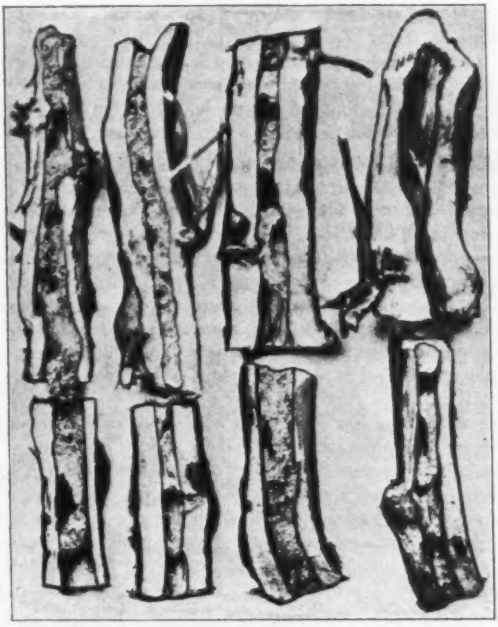
Chinch-bugs Again.—Bulletin No. 37 of the Minnesota Experiment Station furnishes another chapter in the history of experiments against this insect. Dr. Lugger makes substantially the same recommendations for fighting the insects that are made by Prof. Forbes, and he also has had some experience with the "white muscardine." In giving the experience on the Experiment Station Farm, Dr. Lugger shows that the disease appeared there and spread with exceedingly great rapidity during a spell of suitable—that is, wet weather, and that the recurrence of dry, warm weather checked the disease and prevented its further spread. This is, of course, in accordance with the observations made elsewhere. He finds further, however, that after distributing a great lot of insects covered with the fungus to many different points in Minnesota that there were outbreaks of the disease, in some cases sufficient to check further injury. It is admitted that these outbreaks were so extensive that it seemed almost unreasonable to ascribe them to the infestation introduced by the dead bugs; but, on the other hand, is seems that only where these insects were introduced was there any appearance of the disease. All this evidence is interesting, and all runs towards a single direction. It will prove without question a good thing to distribute the disease and to introduce it into all parts of the country where the chinch-bug occurs in injurious numbers; but, having done this, we have done nearly all that it is possible to do. Nature must do the rest—that is to say, it depends then upon the character of the season and upon the meteorological conditions as to whether or not there will be a development of the disease sufficient to do practical good. Again we note a tendency to recommend farm practice and methods of cultivation as remedial—or rather preventive measures—and I feel very certain that the more the insects are studied in the field, and the more we know of their feeding and hibernating habits, the more these methods will come into use for preventing injury from insects. I am convinced that in the course of another decade measures against insects will be quite different in their character from those practiced at the present time.

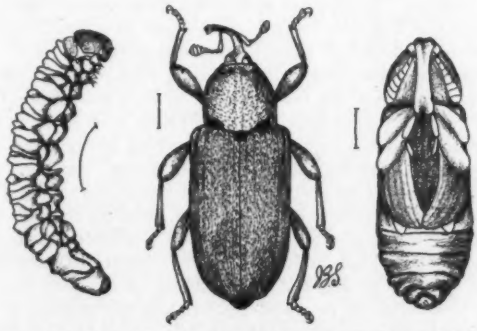
The Potato Stalk Borer.—This species, *Trichobaris trinotata* Say, has been unusually abundant in some parts of New Jersey during the season of 1894. Some parts of Pennsylvania also have been troubled, and among



them the vicinity of Germantown—the locality from which the very first reports of injury from this insect were ever received as far back as the days of Harris and Fitch. The insect has been much more troublesome in the Western States than it has been in the East heretofore, and, curi-

ously enough, none of the collections accessible to me three or four years ago had a single New Jersey specimen of this species, so that I could not





list it among those found in New Jersey. The figures herewith given show a series of vines eaten out by the larva—a series of vines cut at the base

to show the location of the pupa-cell and drawings of the larva, pupa, and imago. Practically, the insect can be dealt with rather easily. It remains in the vines throughout the Winter, as a rule, or at least remains in them until they are dead and dried. Burning the vines as soon as the potatoes are harvested results in destroying all the beetles. Where vines become infested moderately only—that is, not more than three or four larvæ to a vine—the liberal application of readily soluble fertilizers will stimulate the plants, so that it will make and mature a crop in spite of the injury done by the insects.

Legislation Against Injurious Insects.—Bulletin No. 33 of the Division of Entomology, U. S. Department of Agriculture, treats of this subject at some length, giving the full text of all the laws heretofore passed on the subject, and in addition some of the decisions of the courts upon the laws. It appears from this Bulletin that eleven States have passed laws more or less completely covering the subject, British Columbia being included in this enumeration. In Missouri, Kansas, Minnesota, and Nebraska grasshoppers alone form the subject of legislation. In California legislation is most thorough and covers the entire subject. Oregon, Washington and Idaho, as well as British Columbia, have tolerably complete provisions. The New Jersey Act is intended to be comprehensive; but at present writing has not yet succeeded in passing the gauntlet of House, Senate, and Governor and becoming actually effective.

Foul Brood has become the subject of legislative action in New York and in Utah, and, if the present agitation continues, something will probably be done in New Jersey. Most of the opposition in New Jersey comes from the farmers themselves and practically from one section of the country, where the insect question has not forced itself upon them very strongly from the nature of their agriculture. Peculiarly enough, however, that very section which opposes general legislation suffers from "Foul Brood," and is very anxious to obtain legislative action on this particular subject. It affords a very pretty illustration of human nature, and it shows that it always depends upon whose ox is gored as to whether or not it becomes necessary to take active measures.

It will become interesting if, in the future, we can obtain reports from the various States in which laws exist as to their workings. I have followed with some interest developments in New York State on the Black Knot question, and was a great deal amused on one occasion in talking with a farmer to have him declare that if it was anywhere within his power the law would be enforced and he would see to it that no black knots existed in his vicinity. A little later, strolling through his place, I ran across a clump of old cherry trees on a hillside that were simply covered with black knot, and I was further interested later on when I asked him whether he knew of the existence of any such fungus on his place that he asserted in the most positive way that nothing of that kind could be found anywhere within his domains.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

[The Conductors of ENTOMOLOGICAL NEWS solicit, and will thankfully receive items of news, likely to interest its readers, from any source. The author's name will be given in each case for the information of cataloguers and bibliographers.]

To Contributors.—All contributions will be considered and passed upon at our earliest convenience, and as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer, for each number, three weeks before date of issue. This should be remembered in sending special or important matter for certain issue. Twenty-five "extras" without change in form will be given free when they are wanted, and this should be so stated on the MS. along with the number desired. The receipt of all papers will be acknowledged.—ED.

THE CHILIAN MARGARODES.—I expect we shall have to call this insect (see p. 86) *Margarodes vitas* after all, notwithstanding Philippi's strange mistake regarding its nature; but if we agree to reject the name *vitis*, we still cannot accept that now proposed by Mr. E. C. Reed, since Giard described the species last year as *M. vitium*.—T. D. A. COCKERELL.

WASPS IN ENGLAND.—On pages 284 and 334 of the last volume of "Insect Life," reference was made to the extraordinary abundance of wasps in Great Britain during the Summer of 1893, the result probably of the long-continued dry weather of the Spring of that year.

Mr. Henry Cullum, of Utah, has recently sent a clipping from the *Western Daily Press*, of Bristol, England, dated June 27, 1894, in which the statement is made that the Chew Magna Horticultural Society endeavored to reduce the plague by offering the present season a reward of 6*d.* per dozen for queen wasps delivered dead to the Society. Over two thousand had been sent in up to the date of the publication, and the editor of the *Press* advocated the adoption of this plan by other horticultural and agricultural societies throughout the kingdom.

DIASPIS LANATUS—AMYGDALI.—Mr. Maskell writes that he has examined *Diaspis amygdali* Tryon, 1889, on peach from Queensland, and finds it to be the same species as *D. lanatus* Morg. and Ckll., 1891. He says: "The only differences which I can detect are the *very*, *very* slightly less incised terminal lobes of *amygdali*, and a very small increase in the number of spinnerets in *some* specimens." I have never seen authentic *amygdali;* but in the Rept. Dept. Agriculture for 1893, *amygdali* is stated to be distinct from *lanatus*, differing in size, color of ♀ scale, and method of work. Nevertheless, I am strongly inclined to agree with Mr. Maskell that the species called *amygdali* and *lanatus* are all one, the apparent differences being only varietal. The species which must be called *D. amygdali* is now known from the following countries: United States, West Indies, Australia, Ceylon and Japan. The positive evidence of its occurrence in Japan is derived from an examination of specimens collected by Mr. Takahashi, and sent to me by Mr. Howard. More detail will be given on this point hereafter.—T. D. A. COCKERELL.

ÆSCHNA PENTACANTHA IN NEW YORK.—Mr. R. H. Pettit has taken two males of *Æ. pentacantha* Ramb. at Baldwinsville, Onondaga County, N. Y., in June. The species was previously known, I believe, only from Texas, Louisiana and southern Illinois.—N. BANKS.

AN EARLY SUGGESTION OF A MODERN PLAN.—The appointment of Mr. Albert Koebele by the Hawaiian government for the purpose of collecting and bringing to Hawaii beneficial insects which will prey upon injurious species, referred to in a recent number of "Insect Life," was the direct outcome of the success of certain recent experiments in this direction. The idea of the employment of predatory and predacous species in this way is an old one, but just how old we hardly realized until we saw in the "Entomologist's Record" for August, 1894, a little review by F. J. Buckell, of Linnaeus' "Amœnitates Academicæ," which, though bearing the name of Linnaeus, was written by one of his pupils, Andrew John Bladh. In this "entomological antique," as Mr. Buckell calls it, the following suggestion is made: "If we understood how to apply insects properly, we might use them as we do cats against mice, and by attending to the design of Nature, prevent much damage."

THE timely suggestion in the February NEWS with reference to the erection of a monument to Thomas Say in Philadelphia is a most excellent one, and to some extent anticipates another which I had intended to make on closing the Say sketches. It would, it seems to me, be a very proper thing to do if the entomologists of America were to donate a trifle each and erect a neat iron fence about the resting-place of Say at New Harmony. The present owner of the premises, Mrs. Richard Owen and her sons, I am very sure, would be more than pleased to grant permission for its erection. A very small amount contributed by each entomologist would suffice to erect a substantial and appropriate iron fence, enclosing an area of 20 x 24 feet. I can, if desired, secure permission for erection, and get estimates of cost of same and erection, I would suggest that the editor and associate editor of the NEWS, the editors of "Psyche" and the "Canadian Entomologist" be considered a committee to receive (and solicit if necessary) funds for this purpose.

F. M. WEBSTER.

Identification of Insects (Imagos) for Subscribers.

Specimens will be named under the following conditions: 1st, The number of species to be **limited to twenty-five** for each sending; 2d, The sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly. Exotic species named only by special arrangement with the Editor, who should be consulted before specimens are sent. Send a 2 cent stamp with all insects for return of names. Before sending insects for identification, read page 41, Vol. III. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

Entomological Literature.

1. THE AMERICAN NATURALIST. Philadelphia, February, 1895.—The philosophy of flower seasons and the phænological relations of the entomophilous flora and the anthophilous insect fauna, C. Robertson, figs. Two new species of *Lecanium* from Brazil, T. D. A. Cockerell.—March, 1895. The classification of the Lepidoptera, V. L. Kellogg.

2. REVUE BIOLOGIQUE DU NORD DE LA FRANCE. Lille, December, 1894.—Remarks on the organization and comparative anatomy of the latter segments of the body of the Lepidoptera, Coleoptera and Hemiptera (cont.), J. Peytoureau, figs., pls.

3. ARCHIVES DE ZOOLOGIE EXPERIMENTALE ET GENERALE (3), ii, 1894, 4. Paris.—The venomous gland of *Scolopendra*, O. Duboscq, figs. On a marine Dipter of the genus *Clunio* Haliday, R. Chevrel.

4. MEMOIRES DE LA SOCIETE ZOOLOGIQUE DE FRANCE, vii. Paris, 1894 (extracts).—Studies on ants, fourth note: *Pelodera* in the pharyngeal glands of *Formica rufa* L., C. Janet, figs; Seventh note: On the anatomy of the petiole of *Myrmica rubra* L., id., figs.

5. MEMOIRES DE LA SOCIETE ACADEMIQUE DE L'OISE, xv. Beauvais, 1894 (extract).—Studies on ants, fifth note: On the morphology of the skeleton of the post-thoracic segments in the Myrmicidæ (*Myrmica rubra* L. female), C. Janet, figs.

6. CHRISTIANIA VIDENSKABS-SELSKABS FORHANDLINGER, 1893, No. 13 (received Feb. 19, 1895).—Catalogue of Norwegian Lepidoptera, W. M. Schoyen.

7. BULLETIN DE L'ACADEMIE IMPERIALE DES SCIENCES DE ST. PETERSBOURG (v), ii, 1, January, 1895.—Studies on the lymphatic system of insects and myriapods, A. O. Kowalevsky.

8. NOVITATES ZOOLOGICÆ, ii, 1, Tring (England), Feb. 1, 1895.—Descriptions of new species of Lampyridæ in the Museum at Tring, E. Olivier. Notes on Saturnidæ, W. Rothschild.

9. ALTERNATING GENERATIONS, A Biological Study of Oak Galls and Gall Flies. By Hermann Adler, M.D. Translated and edited by Charles R. Straton, Oxford. At the Clarendon Press, 1894, pp. xliii, 198, 3 pls.

10. TRANSMUTATION DER SCHMETTERLINGE infolge Temperaturänderungen Experimentelle Untersuchungen über die Phylogenese der Vanessen. Von E. Fisher, cand. med. Zurich. Berlin, R. Friedländer & Sohn, 1895, 36 pp.

11. BULLETIN 83. Cornell University Agricultural Experiment Station.—A plum scale in western New York, M. V. Slingerland, figs. Ithaca, N. Y., 1894.

12. THE ENTOMOLOGIST'S RECORD, London, Feb. 15, 1895.—Address by the vice-president to the city of London Entomological and Natural History Society [the study of entomology, entomologists], J. W. Tutt. Catalogue of the Lepidopterous super-family Noctuidæ found in Boreal America by J. B. Smith [a review], J. W. Tutt.—March 1st. Notes on *Aphomia sociella*, W. P. Blackburne-Maze, 1 pl. Generic names in the Noctuidæ (cont.), A. R. Grote. The life-history of a Lepidopterous insect; chap. v, the larva or caterpillar, J. W. Tutt. Discussion on the nature of certain colors (cont.), R. Freer, W. S. Riding. Apterous females and winter emergence, E. F. Studd.

13. THE TRANSACTIONS OF THE ENTOMOLOGICAL SOCIETY OF LONDON, 1894, pt. v, Feb. 5, 1895.—President's address: The geographical distribution of butterflies, H. J. Elwes.

14. BULLETIN, No. 32. Texas Agricultural Experiment Station. Austin, Texas, September, 1894.—[On some insects injurious to plums], R. H. Price, figs.

15. ANNALES DES SCIENCES NATURELLES, ZOOLOGIE (7), xix, 1. Paris, 1895.—The glandular apparatus of the Hymenoptera (salivary glands, digestive tube, Malpighian tubes, venomous glands), L. Bordas, 4 pls. [That which is here published includes only the salivary glands].

16. PROCEEDINGS OF THE ENTOMOLOGICAL SOCIETY OF WASHINGTON, iii, 2, 3.—Notes on the discovery of a new Scolytid, with brief description of the species, A. D. Hopkins. [Jan. 7, 1895; author's extra.] Notes on the habits of certain Mycetophilids, with descriptions of *Epidapus scabiei*, sp. nov., A. D. Hopkins, figs. [Feb. 13, 1895; author's extra.]

17. THE KANSAS UNIVERSITY QUARTERLY, iii, 3. Lawrence, Kans., January, 1895.—*Cnephalia* and its allies, W. A. Snow. A new species of *Pelecocera*, id. Exotic Tabanidæ, S. W. Williston. American Platypezidæ, ii, W. A. Snow.

18. GLI INSETTI E GLI UCCELLI considerati per se stessi e per i loro rapporti con l'Agricoltura. Apelle Dei autore. Memoria presentata nell' Adunanza del Comizio Agrario del 29 Aprile, 1894. Siena, 1894.

19. PSYCHE. Cambridge, Mass., March, 1895 (received Feb. 28, 1895).—New North American Odonata, A. P. Morse. Description of some of the larval stages of *Amphion nessus*, C. G. Soule. *Rhopalomera xanthops* sp. nov., S. W. Williston.

20. ENTOMOLOGISCHE NACHRICHTEN, xxi, 1–4. Berlin, January, February, 1895.—On grass galls, E. H. Rübsaamen, figs. Synonymic catalogue of the European Sphecodinæ, Anthreninæ, Dr. V. Dalla-Torre and H. Friese. Supplementary note on *Sphinx* larvæ, Dr. L. Glaser.

21. COMPTES RENDUS, L'ACADEMIE DES SCIENCES. Paris, Feb. 18, 1895.—On *Vespa crabro* L., oviposition; preservation of heat in the nest, C. Janet, figs.

22. MEMORIE DELLA R. ACCADEMIA DELLE SCIENZE DELL' ISTITUTO DI BOLOGNA (v), iii, 1893.—Monographic study of the genus *Azteca* Forel, C. Emery, 2 pls.

23. KNOWLEDGE. London, March 1, 1895.—The intelligence of insects in relation to flowers, Rev. A. S. Wilson, figs.

24. BOLLETINO DEI MUSEI di Zoologia ed Anatomia comparata d. R. Universita di Torino, No. 184, Sept. 30, 1894.—Voyage of Dr. Alfredo Borelli to the Argentine Republic and Paraguay: Orthoptera, Dr. E. Giglio-Tos.—186, Oct. 25, 1894. Id.: Formicidæ, C. Emery.

25. MEMOIRES DE LA SOCIETE ENTOMOLOGIQUE DE BELGIQUE, i. Brussels, 1892.—Synonymic catalogue of the Buprestidæ described from 1758 to 1890, C. Kerremans. [Received March 12, 1895].

26. PROCEEDINGS AND TRANSACTIONS OF THE CROYDON MICROSCOPICAL AND NATURAL HISTORY CLUB. Croydon, 1894.—The silk-worm disease; its cause and prevention, A. B. Farn.

27. BULLETIN FROM THE LABORATORIES OF NATURAL HISTORY of the State University of Iowa, iii, 1, 2. Iowa City, January, 1895.—Narrative and preliminary report of Bahama expedition, C. C. Nutting.

28. THIRTY-SECOND ANNUAL REPORT OF THE MASSACHUSETTS AGRICULTURAL COLLEGE for 1894. Boston, January, 1895.—A new greenhouse pest [*Orthezia insignis* Doug.], C. P. Lounsbury, 4 pls.—Report of Entomological division (received March 8, 1895).

29. SPECIAL BULLETIN, No. 2, OF THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.—Forms of the so-called potato-scab caused by insects, A. D. Hopkins, figs.

30. BULLETIN, No. 37. University of Minnesota Agricultural Experiment Station. St. Anthony Park, Minn., December, 1894 (received March 12, 1895).—The Chinch-bug, O. Lugger, figs.

31. EIGHTEENTH REPORT of the State Entomologist on the Noxious and Beneficial Insects of the State of Illinois. Seventh report of S. A. Forbes. For the years 1891 and 1892. Springfield, Ill., 1894 (received March 8, 1895). Insects injurious to Indian corn; 165 pp., 15 pls.

32. THE JOURNAL OF THE CINCINNATI SOCIETY OF NATURAL HISTORY, xvii, 4, January, 1895 (received March 8, 1895).—Catalogue of the Odonata of Ohio, part i, D. S. Kellogg.

33. THE CANADIAN ENTOMOLOGIST. London, Ont., March, 1895 (received March 11).—Descriptions of some new species of Epipaschiinæ and Phycitidæ, G. D. Hulst. Canadian Coccidæ,—iii, T. D. A. Cockerell. Some new species of *Robinsonia*, W. Schaus. Preliminary studies in Siphonaptera,—ii, C. F. Baker. Notes on some reared Hymenoptera, largely parasitic and chiefly from Ohio, F. M. Webster. The Coleoptera of Canada,—vii, H. F. Wickham, figs. New Hampshire Tenthredinidæ, A. D. Macgillivray. In reply to Mr. Hulst, A. R. Grote.

34. THE ENTOMOLOGIST'S MONTHLY MAGAZINE. London, March, 1895.—Further notes on the habits of *Psyche villosella* Ochs., C. G. Barrett. Occurrence of *Tinea vinculella* H.-S., at Portland, with notes on its life-history, N. M Richardson. Successful introduction of humble bees into New South Wales, A. S. Olliff. *Aleurodes proletella* L. and *A. brassicæ* Walk., a comparison, J. W. Douglas. Recent experiments on the means of protection possessed by *Abraxas grossulariata*, W. F. H. Blandford. Note on a mass of cocoons of *Aphomia sociella* L., C. G. Barrett. Method of sugaring meadows, moors, mountain sides, etc., H. G. Knaggs.

35. THE ENTOMOLOGIST. London, March, 1895.—On the causes of variation and aberration in the imago state of butterflies, with suggestions on the establishment of new species, Dr. M. Standfuss, transl. by F. A. Dixey, introductory note by F. Merrifield. Moth-adipocere, H. G. Knaggs. Jumping beans and jumping eggs, C. G. Bignell.

36. TRANSACTIONS OF THE CONNECTICUT ACADEMY, ix, pp. 400–429 July, 1894 (received March 8, 1895).—Canadian spiders, J. H. Emerton, 4 pls.

37. LE NATURALISTE CANADIEN. Chicoutimi, Quebec, February, 1895 (received March 8).—L'Abbe Provancher (cont.), Abbe V. A. Huard. Coloration in Lepidoptera, Abbé P. A. Begin.

38. DEUTSCHE ENTOMOLOGISCHE ZEITSCHRIFT, 1894, Erstes Lepidopterologisches Heft. Berlin, July 14, 1894.—High Andine Lepidoptera, Dr. O. Staudinger, 2 pls. Palaearctic genera of Lasiocampidæ, Striphnopterygidæ and Megalopygidæ, Dr. C. Aurivillius, 2 pls.—Zweites Lepidopterologisches Heft, Jan. 5, 1895. On the capture and habits of the chief butterflies of the Amazon Valley, O. Michael. [Both parts received March 11, 1895.]

39. THE NATURALISTS' JOURNAL. London, March, 1895.—Pupa hunting (cont.), H. G. Knaggs, figs. Insects that feed on shrubs, S. L. Mosley. Beetles in a timber yard, R. J. Thomson.

40. ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE BELGIQUE, xxxix, 2. Brussels, Feb. 28, 1895 (received March 14, 1895).—New contribution to the study of the Lathridinæ, M. J. Belon.

41. The appearance of the seventh part of "Monographie der mit Nysson und Bembex werwandten Grabwespen,"* by Anton Handlirsh, completes one of the most important and useful works relating to the Hymenoptera published in recent years.

This last part relates entirely to the genus *Bembex*, which, as the author states, is the most difficult and the richest in species in the entire group, his paper containing descriptions of 118 species which he has personally

* Sitzungsb. d. k. Akad. d. Wissensch., Wien, Math.-naturw. Classe, cii, Bd, Abth., i, pp. 657 et. seq.

examined, more than half of which are brought to light for the first time, and 35 species unidentified. The biology of a number of the species is dwelt on at length, comparisons being made with the habits of many other fossorial wasps; and a chapter is devoted to the phylogeny and systematic remarks, and another to the geographical distribution. Coming to the systematic part of the work, we find the species divided into two grand divisions,—the Bembeces genuinæ, consisting of the greater number of the species, and the Bembeces aberrantes; and the species are further divided into 39 minor groups. The author finds that Cresson confused two species in describing *Belfragei*, and in separating the two has named both, thus erecting a new name for *Belfragei*, which it appears he was unable to identify from Cresson's description.

Another change is the substitution of the name *spinolæ* Lepelitier for *fasciata*, under which head American students had known our common species, because the author believes it impossible to identify the *fasciata* of Fabricius from the description, as it is applicable to several other species. The advisibility of this modification is to be doubted, inasmuch as the form which we regarded as *fasciata* has probably more right to the name than any of the allied ones; and as Fabricius' name cannot be dropped, unless proven a synonym, it is more advantageous by far to assign some form to it, fitting the description, than to increase the already too large list of unidentified species of the old authors, which will no doubt never be determined. The author is to be congratulated on the completion of such a valuable contribution to hymenopterology.—W. J. F.

42. We have just received from the authors a copy of an important contribution to the literature of West Indian Hymenoptera, the "Report upon the Parasitic Hymenoptera of the Island of St. Vincent," by C. V. Riley, William H. Ashmead and L. O. Howard, printed in the Linnean Society's Journal, vol. xxv. The work is based on the material collected for the West India Committee by Mr. Herbert H. Smith, whose energy as a collector has been well attested by his previous labors in Brazil. Prof. Riley contributes the introduction and a list of the previously described Parasitica of the island, which is followed by Part 1 of Mr. Ashmead's paper, this being succeeded by Mr. Howard's report on part of the Chalcididæ. Part 2 of Mr. Ashmead's report concludes the work, which includes no less than 254 pages, in which 6 new genera and 299 new species are described. Prof. Riley hopes soon to publish a supplementary paper containing the Microgasterinæ and the Eupelminæ.—W. J. F.

INDEX TO THE PRECEDING LITERATURE.

The number after each author's name in this index refers to the journal, as numbered in the preceding literature, in which that author's paper was published; * denotes that the paper in question contains descriptions of new North American forms.

THE GENERAL SUBJECT.

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Doings of Societies.

MARCH 12, 1895.

A stated meeting of the Feldman Collecting Social was held at the residence of Mr. H. W. Wenzel, No. 1509 South Thirteenth Street. Members present: Messrs. Bland, Dr. Griffith, Dr. Castle, E. Wenzel, Trescher, Fox, Hoyer, Seeber, Boerner, Johnson, H. W. Wenzel, and Smitz. Honorary member: Prof. John B. Smith. Visitor: Levi W. Mengel, of Reading, Pa. Meeting called to order at 8.50 P.M., president Bland presiding. Prof. Smith exhibited a number of interesting photographic prints, the result of some of his recent experiments in that line, his object being to obtain fac-similes from originals for the purpose of photo-engraving, correct reproductions being impossible through the art

of sketching. Among these were a number of prints showing the burrows made by *Scolytus rugulosus* in apple wood, being so arranged as to show the different stages of the life of these insects. These were the best reproductions the members had ever seen, and the professor attributes his success partly to the use of aristo-platinotype paper and the double toning process. These beetles, he said, first burrow one central gallery and then make small lateral chambers at intervals, laying three or four eggs in each, feeding after every deposit, and repeating this work until a beetle has oviposited five or six times its bulk in eggs during a lifetime. Mr. H. W. Wenzel exhibited some interesting Coleoptera from Utah, also stating that *Anthonomus sycophantus* and *A. scutellatus* had been captured very commonly on willow in the Orange Mountains, N. J., last Summer.

It was unanimously resolved that a vote of thanks be extended to Dr. Skinner for the royal manner in which he entertained the social at its last meeting. No further business being presented, the meeting adjourned to the annex at 10.30.

THEO. H. SCHMITZ, *Secretary.*

The Entomological Section

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

PROCEEDINGS OF MEETINGS.

The following papers were read and accepted by the Committee for publication in ENTOMOLOGICAL NEWS:

A NEW VOLUCELLA FROM WASHINGTON.

By D. W. COQUILLETT, Washington, D. C.

Among an interesting lot of Diptera received from Prof. O. B. Johnson for naming, was a pair of specimens belonging to the Syrphid genus *Volucella;* a careful comparison with the existing descriptions indicates that the species is a new one, and it is therefore duly characterized below. Each of these specimens has the marginal cells of the wings open, and the species would therefore belong to the genus *Phalacromyia* Rondani, but in the recent paper by E. Giglion-Tos (Ditteri del Messico, Part I) this is merged into *Volucella*, since he found that the character of the opened or closed marginal cell varies in the different specimens belonging to the same species.

Volucella kincaidii n. sp. ♂.—Black, the scutellum dark fulvous, halteres brownish. Eyes black pilose, that on the lower part reddish; front, cheeks and occiput reddish pilose, that on the face black; face on upper two-thirds straight, the lower third much retreating and concave; upper two-thirds of face in the middle gray pollinose, the remaining surface subshining; proboscis much shorter than either front femur. Thorax subopaque, reddish pilose, its posterior half and a broad stripe on upper edge of pleura black pilose; scutellum convex, rounded behind, destitute of a transverse impression and of bristles, its pile mixed yellowish and black. Abdomen opague velvety, with the exception of the base of the third segment and the whole of the two following, which are shining excepting an indistinct subopaque fascia beyond the middle of the fourth; pile of abdomen reddish yellow; hind femora more slender than the others, hind tibiæ arcuate; pile of hind femora and on bases of the others reddish yellow, that toward the apices of the latter largely black; hind tibiæ quite densely ciliate on the inner and outer sides with rather short hairs, those on the inner side the longest, being slightly longer than the transverse diameter of the tibia. Wings hyaline, apex of subcostal cell brown, a brown fascia extends from base of submarginal cell to posterior end of cross-vein at apex of second basal cell; a brown cloud on the small cross-vein; marginal cell open; calypteres yellowish.

♀.—Same is the ♂ with these exceptions: Face not pollinose, excepting on the sides, its pile yellowish: front subshining, at its middle is a transverse impression extending from eye to eye and more densely punc, tured than the remaining surface; pile of thorax, pleura, scutellum-abdomen and legs yellow. Length 12-14 mm.

Olympia, Washington. A single male and female collected by Mr. Trevor Kincaid, after whom it gives me pleasure to name this interesting species.

OBITUARY.

HANS DANIEL JOHAN WALLENGREN, the well-known entomologist, died Oct. 24, 1894, at Farhult, Sweden, aged 72 years.

ENTOMOLOGICAL NEWS for March, was mailed March 1, 1895.